

IN THE CLAIMS:

Kindly change claims 1 and 22 to read as indicated below.

1 1. (currently amended) Apparatus for incremental print-
2 ing of an image; said apparatus comprising:
3 means for addressing a region of the image at less
4 than full (100%) coverage;
5 means for adding further colorant quanta to selected
6 pixels already receiving said colorant as part of the
7 less-than-full coverage within the region;
8 whereby, within the region, the amount of the colo-
9 rant printed in some pixels is zero, in others is a first
10 nonzero number of colorant quanta, and in still others is
11 a second nonzero number of colorant quanta;
12 wherein the second ~~first~~ nonzero number is different
13 from the first nonzero number; and
14 means for printing the image including the region
15 with the added further quanta.

1 2. (original) The apparatus of claim 1, wherein the
2 adding means further comprise:
3 means for establishing a ratio of number of added-
4 colorant pixels to total number of addressed pixels; and
5 means for setting the ratio to a value below one-
6 half.

1 3. (original) The apparatus of claim 2, wherein:
2 the setting means comprise means for setting the
3 ratio to a value between 0.15 and 0.4 inclusive.

1 4. (original) The apparatus of claim 3, wherein:
2 the setting means comprise means for accepting a hu-
3 man operator manual selection to trade off banding ro-
4 bustness against granularity.

1 5. (original) The apparatus of claim 4, wherein:
2 the accepting means comprise means for expressly
3 presenting to the operator some indicia of the tradeoff.

1 6. (original) The apparatus of claim 5, wherein
2 the indicating means comprise a human-readable scale that
3 indicates:
4
5 increasing banding robustness in one di-
6 rection, and
7
8 decreasing granularity in an opposite
9 direction
10
11 or equivalent.

1 7. (original) A method for reducing band effects in
2 incremental printing of an image; said method comprising
3 the steps of:
4 printing a region of the image at less than full
5 (100%) coverage; and
6 in order to compensate for colorant-placement error,
7 adding further colorant quanta to selected pixels already
8 receiving colorant as part of the less-than-full coverage
9 within the region;
10 whereby, within the region, the amount of colorant
11 printed in some pixels is zero, in others is a first
12 nonzero number of colorant quanta, and in still others is
13 a second nonzero number of colorant quanta;
14 wherein the second nonzero number is different from
15 the first nonzero number.

1 8. (original) The method of claim 7, wherein:
2 said full coverage is approximately one colorant
3 quantum per printer pixel, on-average.

1 9. (original) The method of claim 8, wherein:
2 each colorant quantum forms in the printed image a
3 roughly circular dot of diameter approximately equal to
4 the length of a diagonal across a single printer pixel.

1 10. (original) The method of claim 7, wherein:
2 said full coverage is approximately one-half col-
3 orant quantum per printer pixel, on-average.

1 11. (original) The method of claim 10, wherein:
2 each colorant quantum forms in the printed image a
3 roughly circular dot of diameter substantially equal to
4 twice the height or twice the width of a single printer
5 pixel.

1 12. (original) The method of claim 7, wherein:
2 said full coverage is between one-half and one col-
3 orant quanta per printer pixel, on-average.

1 13. (original) The method of claim 12, wherein:
2 each colorant quantum forms in the printed image a
3 roughly circular dot of diameter between one-half and one
4 times the height or between one-half and one times the
5 width of a single printer pixel.

1 14. (original) The method of claim 7, further compris-
2 ing the steps of:
3 in another region of the image, printing an area
4 fill at less than double (200%) coverage; and
5 within said other region, adding further colorant to
6 selected pixels already receiving colorant as part of the
7 area fill.

1 15. (original) The method of claim 14, wherein:
2 said double coverage is approximately two colorant
3 quanta per printer pixel, on-average.

1 16. (original) The method of claim 15, wherein:
2 each colorant quantum forms in the printed image a
3 roughly circular dot of diameter approximately equal to
4 the length of a diagonal across a single printer pixel.

1 17. (original) The method of claim 14, wherein:
2 said double coverage is approximately one colorant
3 quanta per printer pixel, on-average.

1 18. (original) The method of claim 17, wherein:
2 each colorant quantum forms in the printed image a
3 roughly circular dot of diameter substantially equal to
4 twice the height or twice the width of a single printer
5 pixel.

1 19. (original) The method of claim 14, wherein:
2 said double coverage is between one and two colorant
3 quanta per printer pixel, on-average.

1 20. (original) The method of claim 19, wherein:
2 each colorant quantum forms in the printed image a
3 roughly circular dot of diameter between one and two
4 times the height or between one and two times the width
5 of a single printer pixel.

1 21. (original) The method of claim 7, further compris-
2 ing the step of:
3 at least approximately maintaining a particular
4 ratio between said still other pixels and said pixels
5 receiving colorant as part of the less-than-full coverage
6 within the region.

1 22. (currently amended) A method of adding colorant in
2 a region to which colorant is already addressed, in in-
3 cremental printing of an image; said method comprising
4 the steps of:
5 eliminating or reducing white-line or light-line
6 banding in a region of the image; said eliminating or
7 reducing step comprising the steps of:
8 automatically establishing a ratio of number of ad-
9 ded-colorant pixels to total number of addressed pixels;
10 setting the ratio to a value below one-half; and
11 automatically printing said region of the image with
12 said added-colorant pixels included at said ratio.

1 23. (original) The method of claim 10, wherein:
2 the setting step comprises setting the ratio to a
3 value between 0.15 and 0.4 inclusive.

1 24. (original) The method of claim 11, wherein:
2 the setting step comprises a human operator selec-
3 tion to trade off banding robustness against granularity.

1 25. (original) The method of claim 12, wherein:
2 the setting step comprises a human operator selec-
3 tion on a scale that expressly indicates:
4
5 increasing banding robustness in one di-
6 rection, and
7
8 decreasing granularity in an opposite
9 direction,
10
11 or equivalent.

1 26. (original) The method of claim 10, wherein:
2 the setting step comprises a human operator selec-
3 tion on a scale that expressly indicates:
4
5 increasing banding robustness in one di-
6 rection, and
7
8 decreasing granularity in an opposite
9 direction
10
11 or equivalent.

1 27. (withdrawn) A method of adding colorant in a region
2 to which colorant is already addressed, in incremental
3 printing of an image; said method comprising the steps
4 of:

5 automatically adding colorant by employing a super-
6 pixel that is very insensitive to characteristics of dot
7 placement error; and

8 automatically printing a region of the image with
9 said added colorant.

1 28. (withdrawn) The method of claim 27, wherein:
2 the superpixel is intermediate in characteristics
3 between:

4 [1 0; 0 1],

5

6 [2 0; 0 0].

1 29. (withdrawn) The method of claim 27, wherein the
2 superpixel is selected from the group consisting of:

3

4 [2 0; 0 2],

5

6 [1 0; 1 0],

7

8 [1 1; 0 0],

9

10 [0 0; 1 1],

11

12 [0 1; 0 1].

1 30. (withdrawn) A method of incremental printing of an
2 image by construction from individual colorant quanta ad-
3 dressed to pixels of a printing grid; said method com-
4 prising the steps of:
5 for substantially all tonal levels in a range
6 extending at least from highlight regions to midtones:
7
8 automatically addressing a first number of col-
9 orant quanta to some pixels; and
10
11 automatically addressing a second number of
12 colorant quanta to other pixels, said sec-
13 ond number being larger than said first
14 number; and
15
16 automatically printing a region of the image with
17 said added colorant.

1 31. (withdrawn) The method of claim 30, wherein:
2 said range extends at least from ten percent area
3 fill through forty percent area fill.

1 32. (withdrawn) The method of claim 30, wherein:
2 said other pixels are selected substantially at
3 random from among said some pixels.